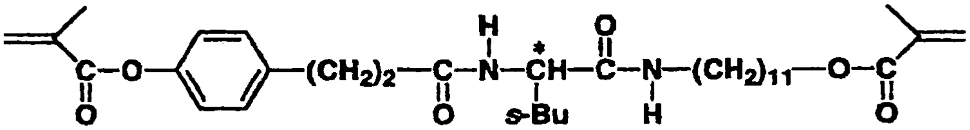
CLAIMS:

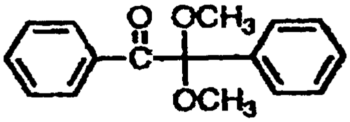
1. A liquid crystal composition comprising a liquid crystal compound, a gelling agent comprising a hydrogen-bonded compound with polymerizable double bonds at both ends to form a gelatinizable mixture with the liquid crystal compound, and a photoinitiator causing a polymerization reaction of the hydrogen-bonded compound of the gelling agent.

2. The liquid crystal composition according to claim 1, wherein the liquid crystal compound is a cyanobiphenyl liquid crystal compound.

3. The liquid crystal composition according to claim 1 or 2, wherein the gelling agent is a hydrogen-bonded compound of the following formula (1),



4. The liquid crystal composition according to claim 2 or 3, wherein the photoinitiator is a compound of the following formula (2),



5. A liquid crystal display element comprising two sheets of rubbed substrates and a display-functioning layer formed between the substrates having non-denatured display function regions of the liquid crystal composition according to any one of claims 1-4, wherein fibrous aggregates in which the hydrogen-bonded compound of the gelling agent is aligned by aggregation are formed in the non-denatured display function regions and alignment of liquid crystal molecules is regulated in the rubbing direction.

6. A liquid crystal display element comprising two sheets of rubbed substrates and a display-functioning layer formed between the substrates having denatured display function regions of a denatured liquid crystal composition obtained by photopolymerization of the liquid crystal composition according to any one of claims 1-4, wherein the direction of alignment of liquid crystal molecules in the denatured display-functioning regions is regulated by aligned fibrous polymer molecules produced by photopolymerization.

7. A liquid crystal display element comprising two sheets of rubbed substrates and a display-functioning layer formed between the substrates, the display-functioning layer possessing non-denatured display-functioning regions according to claim 5 and denatured display-functioning regions according to claim 6.

8. The liquid crystal display element according to any one of claims 5-7, wherein the two sheets of substrates are parallel in the rubbed direction.

9. A method for manufacturing a liquid crystal display element comprising selectively irradiating with light a layer of the liquid crystal composition according to any one of claims 1-4 formed between two sheets of rubbed substrates to form a display-functioning layer comprising the non-denatured display-functioning regions according to claim 5 and the denatured display-functioning regions according to claim 6.

10. A method for controlling a liquid crystal display element having non-denatured display-functioning regions of liquid crystal composition, in which the liquid crystal molecules change into an aligned gelatinized state at a phase transition temperature of T1, and denatured display-functioning regions of liquid crystal composition, in which the liquid crystal molecules change into an aligned state at a phase transition temperature of T2, the method comprising regulating the display conditions of the non-denatured display-functioning regions and denatured display-functioning regions by holding the display-functioning layer at a temperature higher than T1 or T2, whichever the higher, holding the display-functioning layer at a temperature lower than T1 or T2, whichever the lower, or holding the display-functioning

layer at a temperature between T1 and T2.